

## CLAIMS

1. A method for forecasting growth in a wireless telecommunications system, wherein the wireless telecommunications system includes a plurality of system sectors, the method

5 comprising the steps of:

determining the current system traffic for the wireless telecommunications system;

determining the current minutes of use (MOU) for the wireless telecommunications system;

estimating the future minutes of use (MOU) for a first period of time for the wireless

10 telecommunications system; and

forecasting the future system traffic for the wireless telecommunications system based on the current system traffic, the current system MOU and the future MOU.

2. The method as recited in claim 1, further comprising the step of allocating the future

15 system traffic to the plurality of system sectors.

3. The method as recited in claim 2, wherein the allocating step allocates the future system traffic based on the percentage contribution of current system traffic of the plurality of sectors to the total of the current system traffic for the wireless telecommunications system.

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4. The method as recited in claim 2, wherein the allocating step further comprises determining future equipment requirements for at least one of the plurality of system sectors.

5. The method as recited in claim 1, further comprising the step of determining the impact of proposed relief sectors for the system.

6. The method as recited in claim 1, further comprising the step of evaluating sector capacities relative to the available spectrum and the balance between coexisting technologies.

30 7. The method as recited in claim 1, wherein the current system traffic determining step includes determining the average traffic per sector per time period for at least one of the plurality of system sectors.

8. The method as recited in claim 1, wherein the MOU in the wireless telecommunications system includes MOU during peak time periods and MOU during non-peak time periods, and wherein the basis for determining future MOU in the future MOU estimating step includes a growth factor for MOU during peak time periods.

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9. The method as recited in claim 8, wherein the growth factor includes a ratio of an individual sector busy hour (ISBH) erlang growth factor to an MOU growth factor.

10. The method as recited in claim 1, wherein the future MOU estimating step further 10 comprises estimating the future MOU in such a way that the resulting MOU estimation includes an MOU buffer amount.

11. The method as recited in claim 1, wherein at least one of the current system traffic determining step and the current MOU determining step includes determining the number of 15 current subscribers for the wireless telecommunications system.

12. The method as recited in claim 1, wherein the future MOU estimating step includes estimating the number of future subscribers for the wireless telecommunications system.

20 13. The method as recited in claim 12, wherein estimating the number of future subscribers for the wireless telecommunications system includes estimating the number of future subscribers in such a way that the resulting number of future subscribers includes a subscriber buffer amount.

25 14. The method as recited in claim 1, wherein the method further comprises forecasting growth in a wireless telecommunications system that uses a plurality of wireless transmission technologies, wherein the current system traffic determining step, the current MOU determining step, the future MOU estimating step and the forecasting step all are performed for at least one of the plurality of wireless transmission technologies.

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15. The method as recited in claim 14, wherein the plurality of wireless transmission technologies includes Advanced Mobile Phone Service (AMPS), Interim Standard 136 (IS-136), Time Division Multiple Access (TDMA), Global System for Mobile Communications (GSM), Code Division Multiple Access (CDMA).

16. The method as recited in claim 1, wherein the method further comprises forecasting growth in the wireless telecommunications system for a first time period, wherein the future MOU estimating step further comprises determining future MOU for the first time period, and  
5 wherein the future data traffic forecasting step further comprises forecasting future system traffic based on the future MOU for the first time period, the current data traffic, and the current MOU.

17. An apparatus for forecasting growth in a wireless telecommunications system,  
10 wherein the wireless telecommunications system includes a plurality of system sectors, the apparatus comprising:

a computer for use in forecasting growth in a wireless telecommunications system, wherein the computer has at least one processor that executes at least one set of instructions, a memory device coupled to the at least one processor for storing the at least one set of instructions to be executed, and an input device coupled to the at least one processor and the memory device for receiving input data including current traffic data and current MOU data,  
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wherein the instructions stored in the memory device in the computer cause the at least one processor to

20 determine the current system traffic for the wireless telecommunications system based on the current traffic data,

determine the current minutes of use (MOU) for the wireless telecommunications system based on the current MOU data,

estimate future MOU for the wireless telecommunications system based on the current traffic data and the current MOU data, and

25 forecast future system traffic for the wireless telecommunications system based on the current system traffic, the current system MOU and the future MOU.

18. The apparatus as recited in claim 17, wherein the instructions stored in the memory device in the computer further cause the at least one processor to allocate the future system traffic to the plurality of system sectors.  
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19. The apparatus as recited in claim 18, wherein the instructions stored in the memory device in the computer further cause the at least one processor to allocate the future system traffic to the plurality of system sectors, and wherein the allocation includes determining future equipment requirements for at least one of the plurality of system sectors.

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20. The apparatus as recited in claim 17, wherein the instructions stored in the memory device in the computer further cause the at least one processor to determine the impact of proposed relief sectors for the system.

10 21. The apparatus as recited in claim 17, wherein the instructions stored in the memory device in the computer further cause the at least one processor to evaluate sector capacities relative to the available spectrum and the balance between coexisting technologies.

15 22. A computer program for forecasting growth in a wireless telecommunications system, the computer program being embodied on a computer readable medium, the program comprising:

code for determining the current system traffic for a wireless telecommunications system based on current traffic data received by the computer,

20 code for determining the current minutes of use (MOU) for the wireless telecommunications system based on current MOU data received by the computer,

code for estimating the future MOU for the wireless telecommunications system based on the current traffic data and the current MOU data, and

code for forecasting the future system traffic for the wireless telecommunications system based on the current system traffic, the current system MOU and the future MOU.

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23. The computer program as recited in claim 22, further comprising code for allocating the future system traffic to the plurality of system sectors.

30 24. The computer program as recited in claim 22, further comprising code for determining the impact of proposed relief sectors for the system.

25. The computer program as recited in claim 22, further comprising code for evaluating sector capacities relative to the available spectrum and the balance between coexisting technologies.

26. A system for forecasting growth in a wireless telecommunications system, wherein the wireless telecommunications system includes a plurality of system sectors, the system comprising:

5 at least one computer interconnected in a network for use in forecasting growth in the wireless telecommunications system, the plurality of computers having

at least one processor,

10 a memory device coupled to the at least one processor for storing at least one set of instructions to be executed, and

15 an input device coupled to the at least one processor and the memory device for receiving input data including current traffic data and current MOU data,

20 wherein at least one computer is operative to execute the at least one set of instructions, and the at least one set of instructions stored in the memory device in the at least one computer causing the at least one processor associated therewith to:

25 determine the current system traffic for the wireless telecommunications system,

determine the current minutes of use (MOU) for the wireless telecommunications system,

estimate the future MOU for the wireless telecommunications system, and

forecast the future system traffic for the wireless telecommunications system based on the current system traffic, the current system MOU and the future MOU.

20 27. The system as recited in claim 26, wherein the instructions stored in the memory device in the computer further cause the at least one processor to allocate the future system traffic to the plurality of system sectors.

25 28. The system as recited in claim 26, wherein the instructions stored in the memory device in the computer further cause the at least one processor to allocate the future system traffic to the plurality of system sectors, and wherein the allocation includes determining future equipment requirements for at least one of the plurality of system sectors.

30 29. The system as recited in claim 26, wherein the instructions stored in the memory device in the computer further cause the at least one processor to determine the impact of proposed relief sectors for the system.

30. The system as recited in claim 26, wherein the instructions stored in the memory device in the computer further cause the at least one processor to evaluate sector capacities relative to the available spectrum and the balance between coexisting technologies.